

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
DIRECTV Enterprises, LLC)	
)	
Application for Authorization to Operate)	SAT-A/O-20050504-00093
DIRECTV 5, a Direct Broadcast Satellite,)	Call Sign: S2417
at the 109.8° W.L. Orbital Location)	
)	
Request for Special Temporary Authority to)	SAT-STA-20050518-00105
Conduct Telemetry, Tracking and Control During)	Call Sign: S2656
the Relocation of DIRECTV 6 to the 109.7° W.L.)	
and 109.5° W.L. Orbital Locations)	

ORDER AND AUTHORIZATION

Adopted: October 4, 2005

Released: October 5, 2005

By the Acting Chief, Satellite Division, International Bureau:

I. INTRODUCTION

1. With this Order, we grant DIRECTV Enterprises, LLC (DIRECTV) authority to operate its DIRECTV 5 satellite, to provide Direct Broadcast Satellite (DBS) service at the 109.8° W.L. orbital location. We also grant DIRECTV Special Temporary Authority (STA) to relocate its DIRECTV 6 satellite to the 109.7° W.L. orbital location to hand off customer traffic to DIRECTV 5, and thereafter to the 109.5° W.L. orbital location for the remainder of 180 days from the date of release of this Order. These authorizations conclude a series of satellite moves that will allow DIRECTV to maintain continuity of service to its customers from the 109.8° W.L. orbital location.

II. BACKGROUND

2. The DIRECTV 6 satellite currently serves DBS customers on three channels at the 109.8° W.L. orbital location. Because DIRECTV 6 has experienced solar array failures that cause a continuing decrease in operational capacity, DIRECTV seeks authority to replace DIRECTV 6 with the DIRECTV 5 satellite, and then to place the DIRECTV 6 satellite at the 109.5° W.L. orbital location, where it will serve as an in-orbit spare. We previously authorized a series of satellite relocations that made the DIRECTV 5 satellite available for this request.¹

3. Last year, DIRECTV 5, at that time licensed by the Commission, was relocated from the 119° W.L. orbital location to the 72.5° W.L. orbital location.² On the date that the DIRECTV 5 satellite

¹ Applications of DIRECTV Enterprises, LLC, *Order and Authorization*, DA 05-1890 (released July 14, 2005) (*DIRECTV 1 Order*).

² Application of DIRECTV Enterprises, LLC Request for Special Temporary Authority for the DIRECTV 5 Satellite, Application of DIRECTV Enterprises, LLC Request for Blanket Authorization for 1,000,000 Receive Only Earth Stations to Provide Direct Broadcast Satellite Service in the United States using the Canadian Authorized DIRECTV 5 Satellite at the 72.5° W.L. Broadcast Satellite Service Location, *Order and Authorization*, 19 FCC Red (continued....)

arrived at the 72.5° W.L. orbital location, its Commission license was terminated, and it began operations pursuant to a license issued by Industry Canada to Telesat Canada.³ DIRECTV now seeks to reauthorize the DIRECTV 5 satellite as a U.S.-licensed space station so that it can act as a replacement for the failing DIRECTV 6 satellite at the 109.8° W.L. orbital location. We recently authorized DIRECTV to conduct Telemetry, Tracking and Control (TT&C) transmissions necessary to begin the relocation of the DIRECTV 1 satellite from the 101.125° W.L. orbital location to the 72.5° W.L. orbital location, where it replaced the service provided by DIRECTV 5.⁴ In that action, we also authorized DIRECTV to conduct TT&C during the relocation of DIRECTV 5 to the 109.8° W.L. orbital location.⁵

4. On May 4, 2005, DIRECTV filed an application seeking authorization to operate DIRECTV 5 at the 109.8° W.L. orbital location, replacing DIRECTV 6.⁶ The *DIRECTV 5 Application* was placed on public notice on July 1, 2005.⁷ On May 18, 2005, DIRECTV filed an application seeking special temporary authority to operate TT&C on its DIRECTV 6 satellite during a drift of that space station from the 109.8° W.L. orbital location to the 109.7° W.L. orbital location to accomplish the hand-off of customer traffic to DIRECTV 5.⁸ DIRECTV also seeks authority to then relocate DIRECTV 6 to the 109.5° W.L. orbital location for the remainder of the 180-day period commencing on the date of authorization and to maintain DIRECTV 6 at that location as an in-orbit spare. The Commission placed the *DIRECTV 6 STA Request* on public notice on May 20, 2005.⁹ No comments were filed in response to either the satellite application or the STA request.

III. DISCUSSION

A. Orbiting Satellite as Replacement

5. With the *DIRECTV 5 Application*, DIRECTV seeks authority to use the DIRECTV 5 satellite to replace the service now provided by the DIRECTV 6 satellite at the 109.8° W.L. orbital location. Although DIRECTV filed the application as a replacement application, we re-designated the

(...continued from previous page)

15529 (Int'l Bur., Sat. Div. 2004). Frequencies at the 72.5° W.L. orbital location are assigned to Canada under the International Telecommunication Union's Plans for Broadcast Satellite Services and Associated Feeder Links.

³ *Id.* at ¶ 26.

⁴ *DIRECTV 1 Order*.

⁵ *Id.* at ¶ 18.

⁶ DIRECTV Enterprises, LLC, Application for Authorization to Operate DIRECTV 5, a Direct Broadcast Satellite, File No. SAT-A/O-20050504-00093 (*DIRECTV 5 Application*).

⁷ Policy Branch Information, Satellite Space Applications Accepted for Filing, Report No. SAT-00303. The Public Notice noted that the prefix of the file number was changed from "SAT-RPL," designating a replacement application, to "SAT-A/O."

⁸ DIRECTV Enterprises, LLC, Request for Special Temporary Authority, File No. SAT-STA-20050518-00105 (*DIRECTV 6 STA Request*).

⁹ Policy Branch Information, Satellite Space Applications Accepted for Filing, Report No. SAT-00292.

application as a request for operating authority, to reflect the fact that the DIRECTV 5 satellite is already in orbit.¹⁰

B. Interference Analysis

6. We must evaluate the interference potential of the DIRECTV 5 satellite in relation to other DBS licensees and to the radiocommunications systems of other countries. More particularly, Commission rules require that DIRECTV 5 be operated in accordance with Appendices 30 and 30A of the International Telecommunication Union (ITU) Radio Regulations.¹¹ Annex 1 of Appendices 30 and 30A provides the methodology and criteria for determining whether a proposed satellite might interfere with satellite frequency assignments that are in accord with the Region 2 Broadcast Satellite Service (BSS) Plan and its associated Feeder Link Plan, as well as whether the proposed satellite might interfere with other satellite systems, or terrestrial services. DIRECTV states that it will be able to operate DIRECTV 5 within the parameters of the same USABSS-16 filing that was filed with the ITU for DIRECTV 6 at the nominal 110° W.L. orbital location.¹² DIRECTV must fulfill its obligations to complete ITU Region 2 Plan modification process for USABSS-16 in connection with its operation of DIRECTV 5 at the nominal 110° W.L. orbital location. We remind DIRECTV that its satellite operations are not guaranteed protection from interference from systems licensed by other administrations operating in accordance with the ITU Radio Regulations unless and until the Region 2 BSS Plan and its associated Feeder Link Plan are modified to include the technical parameters of USABSS-16. Further, we condition operation of DIRECTV 5 such that, until the Region 2 BSS Plan and its associated Feeder Link Plan are modified by the ITU to include USABSS-16's parameters, DIRECTV shall not cause greater interference than that which would occur from the current USA Region 2 Plan assignments at the nominal 110° W.L. orbital location to other BSS or feeder link assignments, or other services or satellite systems, operating in accordance with the ITU Radio Regulations.

7. DIRECTV requests a waiver of the requirement, in Section 25.215 of the Commission's rules, that DBS antennas meet a cross-polarization isolation of 30 dB within the primary coverage area of the antenna.¹³ The Commission adopted this cross-polarization requirement in 2002, applying the rule to new applications and applications for replacement satellites.¹⁴ While this order constitutes a new authorization for the DIRECTV 5 space station, the already-orbiting satellite was authorized under the former Part 100 DBS rules that did not include a cross-polarization requirement. DIRECTV's transmit and receive antennas are designed to meet a cross-polarization of 27 dB, but have successfully operated for several years, including the operations of DIRECTV 6 at the 109.8° W.L. orbital location.¹⁵ Although DIRECTV's use of 27 dB cross-polarization isolation may not be consistent with the Commission's

¹⁰ See note 7, *supra*. Typically, a replacement satellite is a newly-built satellite for which the applicant seeks authority to launch and operate. See, e.g., Columbia Communications Corp. Authorization to Launch and Operate a Geostationary C-band Replacement Satellite in the Fixed-Satellite Service at 37.5° W.L., *Memorandum Opinion and Order*, 16 FCC Rcd 20176 (Int'l Bur. 2001); GE American Communications, Inc., *Order and Authorization*, 10 FCC Rcd 13775 (Int'l Bur. 1995); Hughes Communication Galaxy, Inc., *Order and Authorization*, 3 FCC Rcd 3989 (1988).

¹¹ 47 C.F.R. § 25.148(f) (2004).

¹² *DIRECTV 5 Application*, Exhibit D at 3.

¹³ *DIRECTV 5 Application* at Exhibit C; see also 47 C.F.R. § 25.215 (cross-polarization requirement).

¹⁴ Policies and Rules for the Direct Broadcast Satellite Service, *Report and Order*, 17 FCC Rcd 11331, 11385 (2002).

¹⁵ *DIRECTV 5 Application* at Exhibit C.

current rules, it is unlikely that the resulting degradation is material. Licensees may use cross-polarization isolation different from that specified for the Region 2 BSS Plan if they demonstrate that such a difference does not result in interference to other operational or planned systems, including U.S. licensed systems.¹⁶ We therefore require that DIRECTV 5 coordinate its operations with other potentially affected satellites, and operate on a non-harmful interference basis relative to any DBS space stations that are in compliance with the cross-polarization isolation requirement.

8. Based on the above considerations, we find sufficient evidence to conclude that operation of DIRECTV 5 at the 109.8° W.L. orbital location will comport fully with all applicable international interference criteria and limitations, including DIRECTV's obligation to cooperate in ensuring that any potential for harmful interference to the satellites authorized to operate at the 110° W.L. orbital location be avoided. We also find that DIRECTV's proposal to provide DBS service from this location will serve the public interest, convenience and necessity in that it will ensure continuity of service to DIRECTV subscribers.

C. License Term

9. Section 25.121(a) of our rules specifies that licenses for DBS space stations not licensed as broadcast facilities will be issued for a period of 10 years, beginning on the date that the licensee certifies to the Commission that the satellite has been successfully placed into orbit and has begun authorized operations.¹⁷ The DIRECTV 5 satellite was authorized in 2000,¹⁸ launched in May 2002,¹⁹ and has operated at several orbital locations for more than three years. We grant a license term of 10 years, effective from the date of this authorization.

D. DIRECTV 6 STA Application

10. DIRECTV seeks special temporary authority in connection with operations of the DIRECTV 6 satellite while customer traffic is handed off to the DIRECTV 5 satellite, and then in connection with relocation of the DIRECTV 6 satellite to a storage orbit. Specifically, DIRECTV seeks authority to conduct TT&C during relocation to and operation at the 109.7° W.L. orbital location, just before the DIRECTV 5 satellite arrives at the 109.8° W.L. orbital location. Once the two satellites are at these orbital locations, DIRECTV will transfer customer traffic from DIRECTV 6 to DIRECTV 5. DIRECTV 6 will then no longer provide customer service. DIRECTV also requests authority to conduct TT&C on DIRECTV 6 after the transfer of customer traffic, during the relocation of the DIRECTV 6 space station from the 109.7° W.L. orbital location to the 109.5° W.L. orbital location, and at the 109.5° W.L. orbital location, where it will remain as an in-orbit spare. The period for public comment on this application has passed. No comments were filed. We therefore grant DIRECTV authority to conduct TT&C in connection with the relocation of the DIRECTV 6 satellite from the 109.8° W.L. orbital location to the 109.7° W.L. orbital location, and thereafter in connection with relocation to and maintenance of the satellite at the 109.5° W.L. orbital location. Given this disposition of the DIRECTV 6 space station, we

¹⁶ See EchoStar Satellite Corp., Directsat Corp., EchoStar DBS Corp. Application for Authority to Make Minor Modifications to Direct Broadcast Satellite Authorizations, Launch, and Operational Authority, *Memorandum Opinion and Order*, 13 FCC Rcd 8595, 8604 ¶17 (Int'l Bur., Sat. Div. 1998).

¹⁷ 47 C.F.R. § 25.121(d)(1)(2004).

¹⁸ DIRECTV Enterprises, Inc., Authority to Launch and Operate a Direct Broadcast Satellite Service Space Station, *Order and Authorization*, 15 FCC Rcd 23630 (Int'l Bur., Sat. and Rad. Div. 2000).

¹⁹ *DIRECTV 5 Application* at 2-3.

dismiss, as moot, DIRECTV's pending request for permanent authority to operate DIRECTV 6 at the 110° W.L. orbital location.²⁰

IV. ORDERING CLAUSES

11. Accordingly, IT IS ORDERED that the application of DIRECTV Enterprises, LLC for operating authority for DIRECTV 5, File Number SAT-A/O-20050504-00093, Call Sign S2417, IS GRANTED, and DIRECTV Enterprises, LLC IS AUTHORIZED to operate its satellite, DIRECTV 5, using channels 28, 30, and 32 in the 12.2-12.7 GHz and 17.3-17.8 GHz bands at the 109.8° W.L. orbital location, with $\pm 0.05^\circ$ longitudinal station-keeping, in accordance with the terms, representations, and technical specifications set forth in its application.

12. IT IS FURTHER ORDERED that the request of DIRECTV Enterprises, LLC for waiver of the cross-polarization requirement of the Commission's rules, 47 C.F.R. § 25.215, is GRANTED, and that the DIRECTV 5 space station shall coordinate its operations with other potentially affected satellites, and shall operate on a non-harmful interference basis relative to any DBS space stations that are in compliance with the cross-polarization isolation requirement.

13. IT IS FURTHER ORDERED that the license term for the DIRECTV 5 satellite, Call Sign S2417, is ten years, commencing on October 5, 2005.

14. IT IS FURTHER ORDERED that DIRECTV Enterprises, LLC has 30 days from the date of the release of this order to decline this authorization as conditioned. Failure to respond within that period will constitute formal acceptance of the authorization as conditioned.

15. IT IS FURTHER ORDERED that, pursuant to Section 25.120 of the Commission's rules, 47 C.F.R. § 25.120, the request of DIRECTV Enterprises, LLC to conduct Telemetry, Tracking and Control functions during a drift of the DIRECTV 6 satellite from the 109.8° W.L. orbital location to the 109.7° W.L. orbital location, File No. SAT-STA-20050518-00105, is GRANTED, subject to the following conditions:

i.) DIRECTV Enterprises, LLC shall coordinate all drift orbit Telemetry, Tracking, and Control operations with other potentially affected in-orbit operators.

ii.) During this relocation of the DIRECTV 6 satellite, operations shall be on a non-harmful interference basis, meaning that DIRECTV Enterprises, LLC shall not cause interference to, and shall not claim protection from interference caused to it by any other lawfully operating satellites.

iii.) In the event that any harmful interference is caused as a result of operations during the relocations of the DIRECTV 6 satellite, DIRECTV Enterprises, LLC, shall cease operations immediately upon notification of such interference and shall inform the Commission immediately, in writing, of such an event.

16. IT IS FURTHER ORDERED that, pursuant to Section 25.120 of the Commission's rules, 47 C.F.R. § 25.120, the request of DIRECTV Enterprises, LLC to conduct Telemetry, Tracking and Control functions during the drift of the DIRECTV 6 satellite from the 109.7° W.L. orbital location to the 109.5° W.L. orbital location and thereafter to conduct Telemetry, Tracking and Control functions to

²⁰ DIRECTV Enterprises, LLC Application for Modification, SAT-MOD-20030613-00121 (seeking permanent authority to operate DIRECTV 6 at the 110° W.L. orbital location, and DIRECTV 1 at the 101° W.L. orbital location). *See also*, *DIRECTV 1 Order*, DAT 05-1890 (dismissing as moot applications affecting DIRECTV 1).

maintain DIRECTV 6 at the 109.5° W.L. orbital location, File No. SAT-STA-20050518-00105, is GRANTED until April 3, 2006 subject to the following conditions:

- i.) During the drift to the 109.5° W.L. orbital location, and while maintaining an orbit at the 109.5° W.L. orbital location, DIRECTV Enterprises, LLC shall not operate the main communications payload on DIRECTV 6.
- ii.) DIRECTV Enterprises, LLC shall coordinate all drift orbit Telemetry, Tracking, and Control operations with other potentially affected in-orbit operators.
- iii.) During relocations of the DIRECTV 6 satellite, operations shall be on a non-harmful interference basis, meaning that DIRECTV Enterprises, LLC shall not cause interference to, and shall not claim protection from interference caused to it by any other lawfully operating satellites.
- iv.) In the event that any harmful interference is caused as a result of operations during the relocations of the DIRECTV 6 satellite, DIRECTV Enterprises, LLC, shall cease operations immediately upon notification of such interference and shall inform the Commission immediately, in writing, of such an event.

17. IT IS FURTHER ORDERED that the pending application for DIRECTV 6 operating authority, File No. SAT-MOD-20030613-00121 is DISMISSED AS MOOT.

18. Assignment of any orbit location is subject to change by summary order of the Commission on 30 days' notice and does not confer any permanent right to use the orbit and spectrum.

19. DIRECTV Enterprises, LLC shall provide the Commission with all information it requires in order to modify the Appendix 30 Broadcasting-Satellite Service Plans and associated Appendix 30A feeder-link Plans to incorporate the characteristics of USABSS-16, in accordance with the ITU Radio Regulations. DIRECTV Enterprises, LLC shall be held responsible for all cost recovery fees associated with these ITU filings. We also note that no protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination and notification procedures are timely completed or, with respect to individual administrations, by successfully completing coordination agreements. Any radio station authorization for which coordination has not been completed and/or for which the necessary agreements under Appendices 30 and 30A have not been obtained may be subject to additional terms and conditions as required to effect coordination or obtain the agreement of other Administrations. *See* 47 C.F.R. § 25.111(c).

20. Neither this order nor any right granted by this order, shall be transferred, assigned or disposed of in any manner, voluntarily or involuntarily, or by transfer of control of any corporation holding this authorization, to any person except upon application to the Commission and upon a finding by the Commission that the public interest, convenience and necessity will be served thereby.

21. This order is issued pursuant to Section 0.261 of the Commission's rules on delegations of authority, 47 C.F.R. § 0.261, and is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

Cassandra C. Thomas
Acting Chief
Satellite Division
International Bureau